

Abstract

An ion mobility spectrometer system comprising: an ion mobility detector; a gas/vapour circulating system for the ion mobility detector into which samples of gases and vapours of interest may be drawn for detection by the ion mobility spectrometer; the circulating system comprising an ion mobility cell, means for drying and/or cleaning the circulating gases/vapours in the circulating system, a dopant source, and means for causing circulation of the gases/vapours within the circulating system; in which the dopant source and the means for drying and/or cleaning the circulating gases/vapours are combined, whereby the need for a physically separate dopant source for the system is obviated. The dopant source material may be combined with the material for drying and or cleaning the circulating gases/vapours.

(Figure 2)